

KNOWLEDGE

VOL 3 OCTOBER 2009

OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

PREVENT WINTER WEATHER WOES

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» **THREE WHO SURVIVED** p. 10

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ARMY SAFE
FallWinter
NO TIME TO CHILL

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ARMY STRONG



U.S. ARMY DEPARTMENT OF DEFENSE SAFETY CENTER
<https://safety.army.mil>

ARMY SAFE
IS ARMY STRONG



3 HAND 4 BROTHERS
& SISTERS

KNOWLEDGE

OFFICIAL SAFETY MAGAZINE OF THE U.S. ARMY

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U.S. ARMY COMBAT READINESS/SAFETY CENTER

<https://safety.army.mil>

Brig Gen. William T. Wolf, Commander/Deputy Army Safety
James Yonks, Director, Strategic Communication
Command Sgt. Maj. Michael P. Eyer, Command Sergeant Major

Chris Frazier, Managing Editor
Bob Van Elsberg, Editor
Paula Allman, Editor

Blakea Grantham, Graphic Design
Taryn Gillespie, Graphic Design
Leslie Cox, Graphic Design (West)
Karni Lisenby, Graphic Design (West)

Mission statement: USACRC supports our Army by collecting, storing, analyzing, and communicating actionable information to assist Leaders, Soldiers, Families, and Civilians in preserving/protecting our Army's combat resources.

We welcome your feedback. Please e-mail comments to safe.knowledge@conus.army.mil.

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Knowledge provides a forum for Soldiers, Leaders and safety professionals to share best practices and lessons learned and

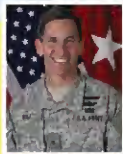
maintain safety awareness. The views expressed in these articles are those of the author and do not necessarily reflect the official policy or position of the U.S. Army, Department of Defense or the U.S. Government. Contents are specifically for accident prevention purposes only. Photos and artwork are representative and do not necessarily show the people or equipment discussed. Reference to commercial products does not imply Army endorsement. Unless otherwise stated, material in this magazine may be reprinted without permission, please credit the magazine and author.

FROM THE DASA F

As your director of Army safety, it gives me great pleasure to introduce you to the newest member of our command team, Command Sgt. Maj. Michael Eyer. Command Sgt. Maj. Eyer is coming to us from the 170th Brigade Combat Team (previously the 2nd Brigade Combat Team), 1st Armored Division in Germany, where he served as their command sergeant major. He brings a wealth of experience and knowledge to the USACR/Safety Center and soon will be hitting the road to meet with your command's safety professionals and to talk to Leaders and Soldiers. I encourage each of you to create a meaningful safety dialogue with Command Sgt. Maj. Eyer and bring him your concerns on safety and listen to what he has to say. He's here to help.

Again, welcome, Command Sgt. Maj. Mike Eyer!

William T. Wolf
Brigadier General, USA
Commanding



I'M HERE

Passion for the mission and a vested interest in the success of our Soldiers by every member of the team makes the total Army more effective.

I recently finished a tour of Iraq with the 2nd Brigade Combat Team, 1st Armored Division. On numerous occasions as I walked the streets of southern Baghdad with the Iron Brigade Troops, I found among the 2nd Brigade Soldiers a passion to make things better for the Iraqi people. This passion for the mission and commitment to excellence drove the brigade's success throughout a 14-month deployment.

In my new role with the USACR/Safety Center, I intend to work with

that same passion as we strive together to make our Army safer both on and off duty.

During more than 25 years of service, I have learned that every successful mission or duty — whether at home, in garrison or on a battlefield — begins with a commitment to safety. This month, the USACR/Safety Center launched the 2009 Army Safe Fall/Winter campaign to provide every member of the Army team the tools they need to make seasonal activities as safe as possible.

I intend to work with that same **PASSION** as we strive **TOGETHER** to make **OUR ARMY SAFER** both **ON** and **OFF DUTY.**

TO SERVE YOU

Whether hitting the slopes, planning a holiday party or packing your gear for a hunting trip, I encourage you to visit the campaign site at <https://safety.army.mil> to check out the wealth of articles, posters and videos that offer safety tips and reminders relating to many fall and winter activities.

Coming on the heels of one of the most successful summer safety campaigns ever, I am excited to see how this campaign will strengthen our Army team's commitment to safety and help us further reduce accidental Army losses during these colder months. I challenge each of you to incorporate important composite

risk mitigation measures into everything you do throughout the year.

As you incorporate these risk mitigation measures into your own lives, think about how what you do could be used to keep our entire Band of Brothers and Sisters safe and tell us about it. What works for you could absolutely work for someone else, and we want to hear about it.

This month, the Safety Center launched the second installment of the Peer-to-Peer video competition to help Soldiers spread off-duty safety awareness among their fellow troops. The competition is open to active-duty, Army Reserve and

National Guard Soldiers. Winners will receive a "Safety Emmy" and up to a \$2,000 cash prize courtesy of the Army's Better Opportunities for Single Soldiers program.

We received many wonderful, insightful videos during the first installment of the Peer-to-Peer competition, and I can't wait to see what our great Army Soldiers can come up with this time.

I would like to thank Brigadier General Wolf for this opportunity to serve our great warriors and their Families and the many civilians who make up our Army team. Additionally, I would like to thank Command Sgt. Maj. Tod Glidewell for his tireless efforts

over the past two years. He has truly made a change in the way we, as Leaders, view the safety of our force.

I am committed to keeping our Band of Brothers and Sisters safe wherever their lives may take them and look forward to working with every one of you as we constantly work to integrate risk mitigation measures into every aspect of our day. I'm here to serve you and your team.

Army Safe Is Army Strong!

Mike Eyer
Mike Eyer

Command Sergeant Major
U.S. Army Combat
Readiness/Safety Center

Prevent

WINTER
WEATHER

Woes

STEVE BISHEL

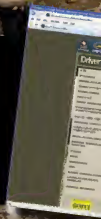
U.S. Army Research and Development Command
Tank and Automotive Research, Development and Engineering Center
Detroit Arsenal, Mich.

Whether you're a newly licensed driver or an experienced 88M with a "gazillion" miles logged, reduced traction from snow, ice and rain can make driving during the winter months especially dangerous. However, while winter weather does pose additional risks to drivers, those risks don't have to result in an accident. There are several things drivers can do to operate their tactical vehicles safely when weather conditions take a turn for the worse.



» FYI

The U.S. Army Combat Readiness/Safety Center's Driver's Training Toolbox has a series of winter driving presentations that can assist you in conducting training. It can be found on our Web site at <https://safety.army.mil/drivertrainingtoolbox/>.



Maintenance

Conduct preventive maintenance checks and services (PMCS) in accordance with your vehicle's technical manual (TM). It is especially important to ensure the antifreeze level and temperature protection are adequate for the winter environment. Also, make sure the windshield washer reservoir is filled with a washer fluid that provides proper cold weather protection. Because visibility is vital for safe driving, it's also a good idea to have new wipers installed. In addition, make sure your battery is in good condition and all lights (headlights, tail lights) are working properly.

Operation

To improve visibility, snow and ice should be cleared from a

vehicle's windows, mirrors, hood, roof, turn signals, taillights and headlights before operation. If you're driving on ice and snow, reduce your speed and maintain a safe stopping distance.

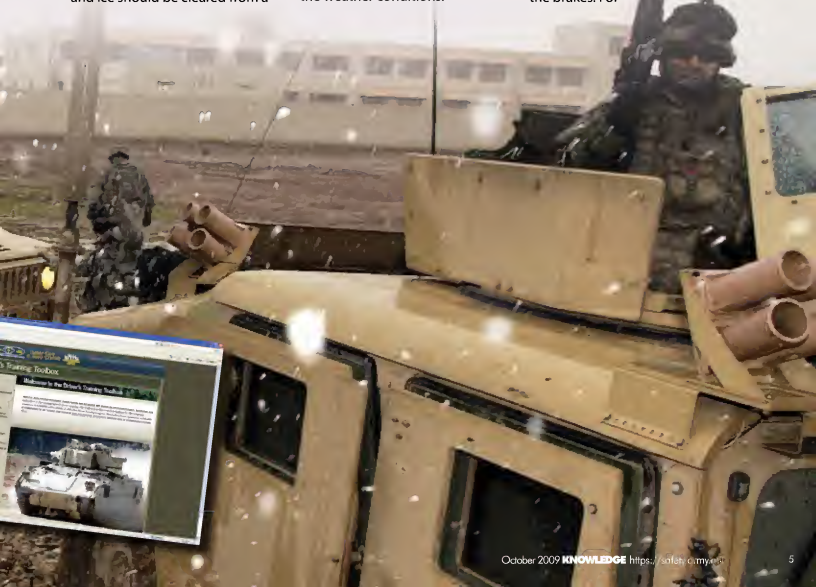
When climbing hills, accelerate slightly as you approach the hill and maintain a steady speed going up. This will allow the momentum of the vehicle to help carry it up the hill. Check the vehicle's TM for the proper gear settings for climbing and descending hills on ice or snow.


Also be aware of black ice, which is an invisible, thin layer of ice on road surfaces, including bridges and overpasses. (For more on black ice, see the info box on page 6.) Of course, you should always wear a seat belt and drive defensively regardless the weather conditions.

Braking

Operators must know what type of brakes are on their vehicle so they can use the proper technique for stopping on ice or snow. For vehicles with conventional hydraulic brakes (no antilock brakes (ABS)), use "threshold" braking by applying the brakes just short of lockup and then easing off the pedal slightly. Sudden braking will lock the wheels and cause the vehicle to slide out of control.

To stop a vehicle equipped with ABS, apply firm, steady pressure to the brake pedal. Do not pump brakes on a vehicle equipped with ABS. For vehicles equipped with air brakes, apply light, steady pressure and do not pump the brakes. For





vehicles equipped with an engine brake, do not apply the engine brake when operating on slick surfaces (ice, snow or rain). Refer to the TM for the type of brakes on your vehicle and specific recommended operations.

Tires

Make sure your vehicle's tires have adequate tread depth. Most tactical vehicles have a mud/sand/snow recommended pressure for added traction in these conditions. For vehicles equipped with the Central Tire Inflation System (CTIS), this would be the sand or snow setting. When no longer operating in snow, tire pressures will need to be increased as per the TM. Refer to the TM for the appropriate tread depth and pressure for your vehicle's tires.

Tire Chains

Use tire chains on your vehicle when conditions (ice and snow) require additional traction, such as in mountainous terrain. Select the appropriate tire chain as specified for your vehicle. If you are unfamiliar with using tire chains, conduct a trial fit on how to install and remove them before the start of a mission. Then you will already have the experience of using them when they are required.

Tire chains are designed to fit snugly; however, you should allow for some movement of the chain on the tire. Tighten chains by hand, rather than tools, to


reduce the possibility of over-tightening. Make sure you carry appropriate straps for tightening the chains if they become loose.

The straps are listed by NSN below:

- 15 inches long, stretches 20 to 30 inches — NSN 5340-01-029-9084
- 21 inches long, stretches 26 to 42 inches — NSN 5340-01-231-6015
- 31 inches long, stretches 36 to 42 inches — NSN 5340-01-029-9085

Reference the appropriate

BEWARE OF BLACK ICE



Black ice — a thin sheet of ice on a dark roadway — is extremely dangerous because it's hard for drivers to detect before they're actually on it. Black ice forms when light rain or drizzle falls on a road surface below 32 F or when super-cooled fog droplets accumulate on bridges and overpasses. A roadway

covered with black ice appears wet when the ambient temperature is below freezing. Drivers must use extreme caution when driving on black ice. Vehicles that hit black ice have greatly reduced traction, very little braking capability and extremely poor directional control — all problems that heighten

the possibility of skidding. Ideally, vehicles should not be driven in black ice conditions. However, if the mission must go on, drivers should reduce their speed, accelerate very slowly, increase the following distance between vehicles, brake very lightly and make all turns gradually and slowly.



TM for installation and restrictions regarding tire chains. When no longer operating in snow, the chains must be removed to avoid damage to the tires or vehicle.

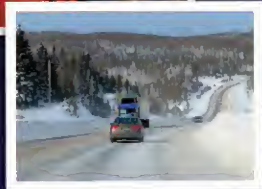
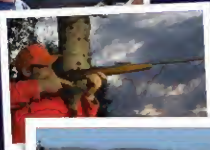
Extreme Cold

Depending on the type of system, your vehicle may have a winterization kit that can be installed for operation in extreme cold. Refer to the vehicle's TM for information on the installation, operation and maintenance of this additional equipment.

Winter weather conditions can challenge any driver. Follow the suggested guidelines above when operating your tactical vehicle in snow and ice and you should arrive at your destination safely.◀



SEASONS CHANGE, SAFETY DOESN'T



GEAR UP!

GO TO
[HTTPS://SAFETY.ARMY.MIL](https://safety.army.mil)
FOR MORE INFORMATION


A Cocktail for

CHIEF WARRANT OFFICER 2 TYLER M. JOHNSON
Detachment 2, C Company, 169th Aviation Battalion
Kentucky Army National Guard
Frankfort, Ky.

Disaster



Obviously, accidents are unplanned events. No one begins a mission planning to have an accident. Have you ever stopped to think about the mistakes you make in the cockpit? In most cases, one mistake doesn't result in an accident. More often, it's a chain of events that work together to trigger an accident. Soon, bad turns to worse and you've mixed a perfect cocktail for an accident.



We may be able to eliminate many, if not all, accidents if the human element were not a contributing factor in the event. Sadly enough, we, as humans, are not perfect and we're certainly going to make mistakes. What we can do, however, is identify, assess and control the hazards. The following scenario illustrates how a combination of several events and uncontrolled hazards almost led to a deadly cocktail.

I began adding "ingredients" to my very own accident cocktail one night in July, flying single-pilot instrument flight rules (IFR). The mission was a one-hour flight to Lexington, Ky., to drop off passengers and fly the routine empty leg home. As I arrived at the airfield that morning to preflight and fuel the airplane, dark clouds were forming. Why be concerned, right? Besides, I had flown this airplane for more than 300 hours and it had a great autopilot, which is a requirement for single-pilot IFR.

The morning went off without a hitch. The passengers were on time and the weather held as we got underway. We landed at Lexington Bluegrass Airport and the passengers informed me they would return by 5 or 6 p.m. and that I needed to wait for them while they conducted their business.

Fortunately, I had friends I could visit while in town for several hours. "This isn't such a bad change of plans," I thought to myself. The day passed and my passengers had not called me by 6 p.m. After a phone call came at 8 p.m. telling me they would be there shortly, I began to preflight the airplane in the now rainy weather. Get-home-itis had started to kick in several hours before, and standing in the rain

was not helping matters. Later on, the passengers called and said they had decided to stay the night, so I could return home and come back the next day to get them.

I suddenly became resentful and frustrated that I had stayed there all day waiting for them when I could have left in the first place and avoided the severe weather. My bitter attitude was now in control. Trying to beat the weather, I hurried to the airplane and forgot to update my flight plan. After starting the plane, I called the flight service station from my cell phone and quickly taxied out for a departure. I was behind the airplane and the power curve way before I ever took off! "No big deal," I thought. I had made this trip at night many times before.

As I climbed and passed through 1,000 feet, I lost all visual reference with the ground and transitioned to IFR. The trip went without incident until I was 30 miles from home station. While I was fortunate to have a great autopilot on board, I chose to disengage the system as I began my descent to 5,000 feet. I navigated the airplane while tuning in the frequency for the VOR (VHF omni-directional radio-range) approach by air traffic control.

I was cleared to 2,000 feet and told to maintain that altitude. My little "cocktail" was almost finished. I chose to trim out the airplane at 2,000 feet instead of re-engaging the autopilot. As I listened to the rain pound the windscreen, I retrieved my approach plates from my bag in the passenger seat. I turned on the cockpit light and reviewed the same old approach I had flown many times before in bad weather. I knew I was only killing

time. What I didn't know was that I was about to nearly kill myself.

The airplane that I trimmed out so perfectly had started a gradual right bank and pitched down slightly; however, I didn't recognize the change in attitude at the time. I continued to "kill time" by doodling on scrap paper when I heard the sound of screaming engines. As I looked at the instrument panel, all I remember seeing was 30 degrees right bank and 15 degrees nose down on the attitude indicator. I was working hard at stirring the cocktail and adding the final ingredient to become another statistic!

I'm here today to write this article because I was able, by the grace of God, to recover the airplane several hundred feet above the ground. Remember, I was flying at 2,000 feet when bad weather turned to worse. I placed myself in a situation that could've resulted in a tragic ending. Looking back, I had added more than enough mistakes to my accident cocktail — poor mission planning, failure to communicate, late mission changes, rushing to beat the weather and even overconfidence. This whole event was nothing more than poor judgment on my behalf.

Lessons Learned

I took a few lessons from this flight. Always keep your head in the game. Don't let external nonsense cloud your mind when you're making critical decisions in the cockpit. The minute the mission changes is the minute you need to reevaluate everything that's going on. The next time you're in a situation where you think you're in total control, ask yourself how many mistakes you are willing to mix into your cocktail for disaster. Fly safe and fly smart. ◀

Three Who Surv

Staff Sgt. Mike Lewis glanced left and saw headlights glaring through his driver-side window. Trapped inside his crashed Ford Mustang as it straddled Interstate 24's westbound left lane, he thought, "This is it — I'm going to die."

Only moments before, Mike; his wife, Marnie; and their daughter, Phelan, had been driving home from a family fun day in Nashville, Tenn. It was Oct. 4, 2008, and visiting Nashville had been Phelan's idea. The 10-year-old wanted to tour the Grand Ole Opry Museum and Ryman Auditorium. She'd gotten her wish, after which the family drove to Opry Mills Mall for lunch and shopping. When they hit the road at 8:45 p.m. to return home to Clarksville, Tenn., traffic was light. They relaxed, expecting to be home within an hour.

But it didn't quite work out that way.

Brenda Gordon's red 2000 Mitsubishi Eclipse would have stood out boldly during daylight hours — but it wasn't daylight. It was about 9:15 p.m. when she inadvertently drove the wrong way up the Exit 8 off-ramp near Clarksville. She somehow avoided hitting anyone, but, in a couple of miles, that would change dramatically.

Somewhere between mile markers 10 and 11, Mike had overtaken a tractor-trailer in the right lane. Since he could legally go 70 mph — 5 mph faster than the 18-wheeler — he pulled into the left lane to pass. The Mustang eased around the big rig as the road curved gently

to the right and began to crest a knoll. As Mike guided the Mustang around the diesel, Marnie chatted on her cell phone with a friend while Phelan played with her new Build-A-Bear stuffed animal.

But as Mike crested the knoll, he wasn't alone. Brenda had escaped being hit head-on by other westbound traffic and was now cresting the knoll from the other side doing 100 mph. As both drivers reached the top of the knoll, the glare from each other's headlights filled their windshields. Mike desperately tried to swerve to the right. Marnie screamed and grabbed the

door handle to brace herself. Phelan, playing with her doll in the backseat, never saw what was coming.

At a combined collision speed of 170 mph, the impact forces were horrendous. As Mike, Marnie and Phelan flew forward, the Mustang's seat belt retractors quickly engaged. The lap and shoulder belts tightened

ived

BOB VAN ELSBERG
Strategic Communication Directorate
U.S. Army Combat Readiness, Safety Center
Fort Rucker, Ala.



forcefully, bruising their shoulders and tearing Mike and Phelan's spleens. Because he'd swerved to the right, the Eclipse hit the Mustang's front bumper on the driver's side, crushing the dash and interior around Mike's legs and trapping him.

The impact sent both cars spinning counterclockwise out of control. The Eclipse struck the median guardrail, careened across both westbound lanes and then went off the road and onto the shoulder. The Mustang's right-rear bumper and

fender spun to the right, slamming into the left-front tires of the diesel's trailer, leaving blue paint smudges on the rims and tires. The Mustang rebounded and then crashed into the median guardrail, stopping sideways in the left lane. The

powerful collision forces had collapsed Mike's seat back onto the backseat. Had Phelan been sitting there, she'd have been crushed.

Still conscious but in tremendous pain and having trouble breathing, Mike heard Phelan crying out,

"What happened ... what happened?" He called out, "Phelan, Phelan!" and tried to twist out of his crushed seat to reach her. Trapped, he could not move. Then Marnie screamed again. Mike glanced up and saw headlights through his driver-side window. He was about to be T-boned. The last thought that flashed through his mind was, "This is it — I'm going to die!"

Heath Smith was driving his gray Honda Accord in the westbound left lane when his tires began hitting crash debris on the highway. Braking as he crested the knoll, he was shocked to see the Mustang sitting sideways, blocking the lane ahead. There was no way Heath could swerve in time to avoid hitting the Mustang and struck Mike's door, pushing it in deeply. In shock, Mike lost consciousness.

It was now 9:23 p.m. and, mercifully, the collisions were over. Drivers stopped to

render help. Passersby called 911 and tried to comfort Marnie. Her right arm was badly broken and she believed Mike, who was motionless and silent, was dead. Other motorists gently removed Phelan through the Mustang's shattered rear window, carefully brushing shards of glass from her hair and forehead. Fortunately, the cuts on her face and legs were only minor. One Good Samaritan wrapped Phelan in a blanket and, cradling her like a baby, held her until emergency responders reached the scene. It didn't take long.

"The ambulance got there pretty quick," Phelan said. She was placed inside, given an IV and later transferred to a helicopter that flew her to the Children's Center at Vanderbilt Medical Center in Nashville.

Getting Mike and Marnie out was much tougher. Emergency personnel used the Jaws of Life to remove Marnie's

door and extricate her from the wrecked car. To reach Mike, they had to cut off the Mustang's roof. He was still alive, but in critical condition. He and Marnie were flown in separate helicopters to Vanderbilt Medical Center, close to where Phelan was being treated.


It would be days before the family was reunited. Phelan was the first to be discharged, being released four days later to her grandmother. Mike and Marnie stayed much longer. Marnie's pelvis was crushed in five places and required extensive surgery and rehabilitative therapy. Mike spent 12 days in the hospital, during which a complex surgery implanted steel rods in his upper left leg to strengthen his damaged femur.

Eight months after his accident and surgery, he still walks with a limp. However, he is looking forward to the day he will return to his

duties as an explosive ordnance demolition specialist with the 723rd Ordnance Company at Fort Campbell, Ky. A veteran of Iraq who had detonated improvised explosive devices to protect other Soldiers, he'd almost died on the road a few miles from his home. But for the Army, that happens all too often. Accident trends consistently show Soldiers are more likely to die in their vehicles on the highway than by accidents in combat zones.

That is the moral of this story. Sometimes, Soldiers and their Families are the innocent victims of other people's irresponsibility. There was nothing Mike, Marnie or Phelan could have done to foresee or prevent this accident. The only thing they could do was increase their chances of surviving by buckling up when they got into the Mustang.

Mike is convinced those seat belts made



SEAT BELTS definitely **SAVED** our **LIVES.** As fast as **SHE** was **GOING** and **WE** were **GOING**, we'd have **NEVER** made it **WITHOUT** them.

a huge difference that night for him and his family. They kept him and Marnie from being thrown through the windshield and onto the road. They kept Phelan in place in the backseat, preventing her from either being ejected from the car

or thrown behind the driver's seat and crushed.

As Mike thought back on that night and the 170-mph, head-on collision with the Eclipse, he said, "Seat belts definitely saved our lives. As fast as she was going and we were going, we'd have never

made it without them."

Mike's thoughts were echoed by Michael Browning, public affairs officer for the Tennessee Department of Safety. He has seen a multitude of accident reports and knows, from experience, the role seat belts play in saving lives.

"In crashes that would otherwise be fatal, you have a more than 70 percent chance of surviving if you are restrained," he said. ◀◀





FIGHTERS

CHIEF WARRANT OFFICER 4 CHRISTOPHER D. VOLKERT
 Ground Task Force
 U.S. Army Combat Readiness/Safety Center
 Fort Rucker, Ala.

The Department of Defense and Army, along with defense contractors and manufacturers that support them, are always looking for ways to enhance safety and improve the survivability of Soldiers who operate equipment used on the battlefield. One such enhancement is the automatic fire extinguishing system (AFES) or fire suppression system (FSS).

Many of the Army's systems, including the Abrams, Bradley, HMMWV, Mine Resistant Ambush Protected vehicle and Stryker, contain either the AFES or FSS. These devices provide a line of defense between the vehicle crew and any fire that might result from an explosion. Within a fraction of a second after fire is detected inside the vehicle, the system can extinguish the flames before equipment is ignited and, more importantly, Soldiers are burned.

However, like any other mechanical device or system,

the AFES/FSS cannot perform its mission without some conditions being satisfied. It must be properly operated by trained crewmembers and regularly inspected. Any faults or shortcomings in the system must be reported to qualified maintenance personnel who can service, repair or replace the faulty components.

Crews must take the time to clean components to ensure they will function properly when needed. Also, the system must be regularly and properly serviced in accordance with the appropriate technical publications. If these conditions are met, Soldiers can be confident that the AFES/FSS installed in their vehicle will function "as advertised" to keep them safe.

While there are differences between the AFES and FSS that are dictated by the system they belong to, they operate based on the same principles. Both have some type of control panel or box which allows the operator to enable or disable the system as required. Both also have an infrared (IR) sensor system designed and positioned to quickly detect and analyze the initial formation of a fire. The sensor does this by measuring changes in IR light across a designated spectrum. When the detected flame exceeds the

prescribed threshold, the system engages to extinguish the fire. Of course, each system has a set of bottles that contain the fire-extinguishing agent. The AFES and FSS are most commonly installed in crew and engine compartments, but some vehicles may have additional coverage in other parts of the vehicle.

When operating a vehicle with an AFES/FSS, adhere to the following do's and don'ts:

Do:

- Have confidence in the system. It has been tested repeatedly by the Army at Aberdeen Proving Ground.
- Take the time to become familiar with the system. Learn how to operate and maintain the system in accordance with the required training manuals so it functions properly.

Don't:

- Block sensors or distribution nozzles. A sensor must be able to "see" the area it protects. Nozzles must be able to broadcast the agent throughout the area to be protected.
- Install, remove or handle the bottles without first ensuring the anti-recoil plug is installed in place of the discharge nozzle. Without

this device installed, the bottle could become a projectile (in other words, fly like a missile).

- Weld, cut or braze within three feet without disconnecting the system (see appropriate technical manual).
- Use high-intensity lamps pointed within a few inches of the sensor during hours of darkness.

Most mistakes made by operators and crews working with an AFES/FSS result from Soldiers not being familiar with the system installed on their vehicle. This lack of knowledge and understanding often results in mistakes that lead to system errors or failures. Consequently, rumors may spread that the system was at fault. Unfortunately, this can diminish the confidence Soldiers and Leaders have in the system.

Mistakes are often made during transportation loading and unloading operations at the port or railhead. Operators who load or unload equipment must be familiar with the operation of an AFES/FSS to prevent unintended discharges. The accidental activation of an AFES/FSS by untrained personnel could be a source of rumors that the system "goes off whenever it wants." Pay special attention to ensure personnel detailed for loading operations are trained and carefully read the labeling on switches. A Soldier who is unfamiliar with a system can easily flip the wrong switch at the wrong time, causing an unintended discharge.

There are other myths associated with the AFES/FSS. Contrary to what many believe, Soldiers can remain inside the vehicle — if necessary — after the system has discharged, which allows enough time to drive out of a hostile area if the situation requires. It is also safe to be near the IR sensors, as they only receive IR and do not emit any signal.

The AFES/FSS is an effective means of keeping Soldiers safe. However, it's only as effective as the training given to the Soldiers who operate and maintain it. Technical manuals and publications from individual manufacturers provide all the required information on the systems found in your unit's vehicles. Use that information to prepare your Soldiers to operate this equipment properly.◀

make a movie, save a life.



Peer to Peer



The competition runs
Oct. 1, 2009 to April 30, 2010

For more information and contest
rules for Peer to Peer, go to

[https://safety.army.mil/
videocompetition](https://safety.army.mil/videocompetition).



The U.S. Army Combat Readiness/Safety Center's Driver's Training Toolbox contains "smart cards" for the Kidde Automatic Fire Extinguisher System. The cards can be downloaded for local reproduction at <https://safety.army.mil/drivertrainingtoolbox/>. Look under the "Graphic Training Aids" tab.

Rules for the Ghouls

DON BURNS
842nd Transportation Battalion
Beaumont, Texas

Halloween is a time of endless imagination — when children can dress as anything they want, from monster to movie star. But before you open the front door to unleash your children on the neighborhood, did you warn them of the dangers they could encounter? If not, you need to explain the rules of the night.

The Quest for Treats

Before leaving the house, parents should carefully map the trick-or-treating route. Children must understand that this is the plan and they shouldn't deviate from it. For parents of children who are old enough to trick-or-treat on their own, this will allow you to check on them along the way.

Children should also know they must be especially careful when crossing the streets, looking both ways for traffic. It's a good idea to trick-or-treat in groups, which will make children more visible to

motorists. Flashlights are another good tool to make children more noticeable and will also help light dark pathways and driveways. If you or your children see a house that doesn't have decorations or lights on, chances are the owners don't have the Halloween spirit. Stay away! Also, instruct children to not talk to, or get into cars with, strangers.

The Inspection


For some children, the temptation of a bag full of candy is just too great, so they might try to "sample" their treats along the way. Make it clear that all





Parents are responsible for their children's safety. To help keep your children safe this Halloween, follow these simple tips provided by the Home Safety Council:

- Be sure all children under age 12 trick-or-treat with an adult. Walking on dark streets can be dangerous.
 - Only permit trick-or-treating at the homes of friends and neighbors you know well.
 - If you buy a costume, read the box or label. Look for the words "flame retardant" or "flame resistant." These costumes are more fire-safe.
 - Make sure the costume is the right size so your child won't trip on it. (*Editor's note: Light-colored or reflective costumes make children more visible.*)
 - Give your child a flashlight or light stick to carry.
 - Make sure your child can see well. Only use masks with large holes for the eyes, or use face paint instead of a mask.
 - Be sure that costume accessories, such as knives and swords, are made of a soft material that bends easily.
 - Never carry candles, torches or other open flames as part of a costume.
 - Keep shoelaces tied. Be careful of pumpkins and things on porches that can trip your child.
 - Make sure all children in the group carry an ID card with their name, address and emergency phone numbers (including area code) in case they get lost.
 - Remind children to walk, not run, especially after dark. If possible, stay on sidewalks.
 - Carefully look through your children's candy before you let them eat it.
 - Throw away open treats and those not in their original wrapping. Discard homemade goodies from unknown sources.
 - If you think your child has eaten something that made him sick, call 911 or the Poison Control Hotline at 1-800-222-1222.
 - Tell children to sit down when they eat and to take small bites.
 - Young children should never help carve a pumpkin. Instead, decorate pumpkins with markers, paint or stickers.
- For more information, visit www.homesafetycouncil.org.



candy must be inspected before it's consumed. If your children want to eat candy while they trick-or-treat, give them some goodies you brought from your house.

Once the evening is over, inspect all candy and treats. Throughout the years, experienced trick-or-

treaters know what to look for in candy appearance. Candies that have loose or missing wrappers are suspect, so check them closely. If a treat appears tampered with in any way, throw it in the trash.

Halloween should be a night full of fun and laughter. If done right,

the memories will live in the hearts of your children forever. Make this Halloween one to remember by focusing on safety. That's the best "treat" you can give them. After all is said and done, just remember that Dad gets all the Tootsie Rolls!◀

BE CAREFUL WHAT YOU WIS

The day began just like any normal duty day. The mission was a standard OH-58D reconnaissance flight to prevent counter-insurgency indirect fire into outlying forward operating bases (FOB) and provide support as needed. I was flight lead in the left seat, allowing my platoon leader to get some right-seat stick time. It was just another routine goggle flight in Iraq.

The illumination was close to 100 percent and the night seemed like it was going to be a quiet one with no imminent threat. We had been operating in this area for the past few months and were very familiar with the individual sectors and the route structure. We made our way through the city staying above 250 feet, which was our hard deck for goggle operations at that time due to the number of towers in the city. We ensured our actions were unpredictable, paying special attention to often-used points of

origin (POO) sites of indirect fire.

We returned to the forward arming refueling point (FARP) as we were getting low on fuel. It was a particularly calm night and we needed to break up the monotony. We departed the FARP as soon as we refueled. This time we took a different departure route to break up any patterns we may have established. I made a comment to my trail aircraft that I hoped this bag of gas wasn't as boring as the last. It wasn't.

As we approached the edge of the city to make our way to another POO site a few kilometers

away, my aircraft simultaneously pitched up and turned abruptly to the right. Still flying left seat, I immediately grabbed the controls and, at the same time, looked toward my right-seater to see a flash of light coming up from the ground. It looked like a roman candle passing to our 6 o'clock. At the same instant, trail came on the radio stating, "I have the POO!" He was about to engage when he saw me do a 180. He suddenly aborted his engagement to avoid hitting me.

I checked the aircraft's systems and identified the loss of tail rotor

SH FOR

CHIEF WARRANT OFFICER 3 KEVIN BELANGER
Defense Contract Management Agency
Bell Helicopter Textron
Fort Worth, Texas



control along with a complete loss of hydraulic power. As I attempted to regain aircraft control and get the altitude and airspeed stabilized, I noticed we had lost airspeed and altitude. We had been flying fairly straight and level at roughly 65 knots and 250 feet above ground level. By the time I took the controls, the airspeed had slowed to roughly 40 to 45 knots and I had zero tail rotor control, which meant full pedal movement resulted in no aircraft response. I checked the aircraft instruments and didn't see any abnormal conditions or indications. Now, keep in mind this all happened within a couple of seconds —

although it felt like an eternity.

I had multiple subsystem failures as well. The multifunctional display had various caution, warning and advisory messages. My main concern was trying to regain aircraft control. My airspeed was still about 40 knots and I knew I needed forward airspeed to get the aircraft streamlining and under control again. I managed

to establish communication with my co-pilot by transmitting over UHF, as my internal communications were gone. I got my point across that I needed to recover some forward airspeed and he assisted by helping me push the cyclic forward. Once we gained airspeed and stabilized our altitude, I managed to recover and fly the aircraft back in a left sideslip and perform a



“ Get to **KNOW** the **ASSETS** in your **AREA** of **OPERATION**, **INCLUDING** those on **YOUR OWN FOB.** ”



run-on landing at the airfield.

I kept my airspeed up and slid along the active runway, using a good portion for my run-on landing. I maintained heading with the throttle as I was sliding along and I made sure I didn't overcontrol the aircraft. I continued to apply throttle to maintain aircraft heading while slowly lowering the collective. As the aircraft began to slow down, I rolled the throttle to idle and slid about 50 feet, finally coming to a stop 90 degrees off the active heading. Upon postflight, we identified foreign object debris damage from a weapon system that punched through our aircraft without detonating. The rocket that hit us severed the tail rotor push-pull tube, directional control hydraulic lines and a few other subsystems.

Our flight crew is happy to be alive today. However, during the time I was attempting to regain control, my air mission commander (AMC) was worried we might not recover and had already

notified the military police (MP) patrolling the streets to move to our location. We had also been supporting missions for a couple of special ops communities and worked out a partnership of sorts. Our AMC, knowing they were leaving the FOB shortly, contacted them to move in as well. In a matter of minutes, I had MP's and ground special operations teams moving to our location.

The point I'm trying to make is although we have a system established in theater as the "fallen angel" call, it still takes time to get ground assets moving in the right direction. Having personally been involved in providing security during an actual fallen angel, I can say that it takes time to relay info to your tactical operations center and then get forces moving.

Get to know the assets in your area of operation, including those on your own FOB. Establish a close working relationship — or at least develop a plan of action — so you can contact them in the event of

an emergency. Know the missions of adjacent units and where they will be conducting them. At the very least, talk to them, get their frequencies and keep them as a quick reference on your kneeboard so you can contact them.

When we had our after-action review, it was comforting to know those assets aborted their missions and were en route, just in case we needed them. At least for me, having aerial security is good, but having ground forces roll into your area quickly is even better. Lastly, continue flying the aircraft no matter what happens.◀

Who Took the Picture



1ST LT. SHELTON D. JOHNSON
177th Armored Brigade Safety Officer
Camp Shelby, Miss.

Editor's note: The names of the individuals mentioned in this story have been changed to protect their privacy and that of their families.

1st Lt. Anthony Gonzales was preparing for one of the greatest challenges of his life as a Soldier — a deployment to Iraq — and decided to take some time off. Even though he loved being with his Soldiers at Camp Shelby, Miss., he wanted to take a four-day pass to travel to North Carolina to see his wife, who was expecting a baby girl any day.

Gonzales, a platoon leader, mentored his Soldiers and they respected him for being a good Leader. Several weeks earlier, he and some of the other Soldiers bought motorcycles with the extra funds they had received now that they had been mobilized. They all attended Motorcycle Safety Foundation training — a requirement for all Soldiers who ride —

and then were counseled by leadership on motorcycle safety.

Gonzales planned to take Friday through Monday for his four-day pass. As he got off duty at 4:30 Thursday afternoon, 1st Lt. Brian Woodard reminded Gonzales of a get-together to watch a game that night. Since he wasn't leaving until the following day, Gonzales decided to attend the party and rode his bike. When the game ended, he called his wife to tell her he was headed back to his apartment. As he was leaving, Woodard shook his buddy's hand and told him to be safe.

Heading home on U.S. 49, Gonzales gunned it on a straight stretch of road and bent the speedometer needle past 100 mph. He'd reached 110 mph when a driver failed to see him approaching, pulled into the road and blindsided him. The impact threw Gonzales more than 50 feet through the air before he landed on the road, where he died on impact. Tragically, Gonzales never took that four-day pass. He'd never see his wife again or meet their baby girl.

Gonzales' unit investigated his death. Some of the answers the

“ **HEADING HOME** on U.S. 49, Gonzales **GUNNED IT** on a **STRAIGHT** stretch of **ROAD** and **BENT** the speedometer needle **PAST 100** mph. ”



investigating officer got during his interviews led him to check out Gonzales' MySpace page. When he opened it, he saw pictures of Gonzales performing dangerous stunts on his motorcycle. Most surprising — almost prophetic — were those photos showing Gonzales speeding on U.S. 49. A person riding in a car alongside him took a photo titled, "This is me at 110 mph."

I wondered who took that picture because they could have helped save his life. Instead of encouraging him to risk his life for a "cool" photo, they could have warned him to consider the possible consequences. Yet, time and again, Soldiers egg each other on to take needless, even deadly, risks just to prove they can do it. Sure, Gonzales was responsible for his decision to ride recklessly, but he didn't make that decision in a vacuum — others encouraged him.

So, what about you? What will you do when you see a buddy taking needless risks? Will you warn them of the dangers or egg them on to see what happens? Will you mentor them or set them up to be a fallen comrade? The moment you know a buddy is at risk, you've stopped being an "innocent" bystander. You are responsible. You have a choice. What will you do? <<

**Share street smarts
while helping your
battle buddy!**



MMP

MOTORCYCLE MENTORSHIP PROGRAM

**Mentoring can be fun and set up
in various ways.**

- Unit-level one-on-one mentorship
- Unit-level riding groups
- Private organization
- Combination unit program and private organization at the installation level
- Non-appropriated fund instrumentality

**Check out the MMP Web site for some
examples of active mentoring programs:**

<https://safety.army.mil/mmp/>

When Sparks

MICHAEL WOOD
Ground Task Force
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

In combat, Soldiers are constantly scanning the surrounding area, looking for enemy contact from weapons and improvised explosive devices (IED). Maintaining situational awareness on the battlefield assists them in identifying enemy hazards so they can make correct decisions to prevent serious injury and death. Yet, when some Soldiers enter the forward operating base (FOB), that high state of alertness often diminishes, which leaves them vulnerable to hazards that can cause accidents.

Improperly operated equipment such as heaters, stoves and generators can cause property damage, severe injury and, in some instances, death. The Army experiences these types of accidents each year. The following two fires occurred in 2008 and are typical of accidents that happen to Soldiers during training exercises and while deployed.

The first accident occurred on a range in a sleeping tent. The potbelly stove had gone out, so a Soldier attempted to restart it by pouring fuel into it. The

heater had not properly cooled and the fuel ignited, sending flames into the Soldier's face. The Soldier received first-degree burns on his face and eyes.

In the second accident, a Soldier was tasked to refuel a non-Army-standard 25K FG Wilson P250 HE generator — an operation he had conducted successfully many times during his deployment. The 5-gallon fuel can he was using was plastic with a metal spout and filled with JP-8. The generator was still operating as the Soldier began the refueling operation.

As the Soldier brought the fuel can up to the fuel reservoir, the metal fuel spout came into contact with the live electrical wires connected to the generator starter. This contact produced an electrical spark that ignited the fuel, causing the fuel can to explode and engulf the Soldier in flames. The Soldier received burns on more than 60 percent of his body and now has a permanent total disability.

There were two major factors in these accidents. The first Soldier did not let the heater cool before trying to relight,

Planes Fly

and the second Soldier refueled the generator while it was still in operation, which meant the starter wires were producing an electrical current. Fortunately, fires involving equipment and fuel are preventable if the following precautions are taken:

- Leaders must ensure all Soldiers are trained and licensed on the equipment they will operate.
- Soldiers should follow the equipment technical manual on operation, refueling and preventive maintenance checks and services.
- Proper personal protective equipment must be available and used to allow Soldiers to safely conduct the operation.
- Each generator must be properly grounded.
- A fully operational fire extinguisher must be in close proximity, and fuel storage should not be located next to the piece of equipment.

For the most part, Soldiers do a great job protecting themselves outside the wire. However, they can't let their guard down once they return to the FOB. Leaders can help stop this needless loss of equipment, serious injuries and deaths by ensuring Soldiers are trained to Army standards on each piece of equipment they operate. This will allow them to recognize hazardous operations and stop any unsafe acts.◀

ARE YOU READY?



ARAP

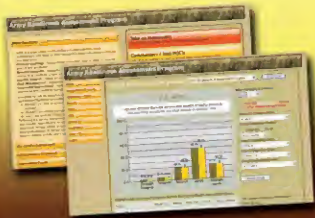
ARMY READINESS ASSESSMENT PROGRAM

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ARAP is a Web-based initiative that provides battalion-level commanders with data on their formation's readiness posture.



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It's "zero-dark-thirty" on a Saturday morning and you're cranking your car to drive to weekend drill. As you set your coffee cup in the holder, did you realize you are already on duty? That's right — as a Soldier in the Army National Guard or U.S. Army Reserve, your on-duty time includes trips to and from drill. This means that when you pull out of the driveway, you must obey the driving statutes of your city, municipality and state, as well as Army Regulation 385-10, The Army Safety Program.

"DRILLING IN" DRIVING SAFE

BENJAMIN A. BAILEY
Driving Test Force
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

So, what does this mean as you start your trip? Here is a summary of things you need to do:

- Check your vehicle's mechanical condition before starting your trip. Make sure your tires are in good condition and properly inflated. Lift the hood and inspect your vehicle's oil, transmission, power steering, power braking and coolant levels. Check your lights, signals, horn and windshield wipers.
- Ensure you and all passengers are wearing seat belts.
- Make sure you — or whoever is driving — is properly rested.
- Drive safely, observing speed limits and obeying traffic laws.
- Don't drive distracted by talking or texting on your cell phone.
- Clean your windshield, windows and mirrors. Also, take a few moments to adjust your mirrors to eliminate any blind spots.

- Make sure your direct supervisor knows if you use any prescription or nonprescription medications that could reasonably impair your driving or alertness.
 - Notify your commander of any traffic violations on or off post.
 - If you're a passenger, be a battle buddy and help the driver spot any hazards on the road.
- Do you ride a motorcycle to duty? Most of the above safety precautions still apply except for the use of seat belts and certain maintenance items. One key requirement for operating motorcycles is to wear personal protective equipment (PPE) every time you ride. That PPE includes:
- A Department of Transportation-approved helmet (regardless of state helmet laws).
 - Impact- or shatter-resistant goggles, glasses or shields (must meet or exceed American National Standards Institute Z87.1).



- Sturdy footwear, leather boots or over-the-ankle shoes.
- A long-sleeved shirt or jacket, long trousers and full-fingered gloves or mittens.
- A brightly colored outer upper garment (day) or reflective upper garment (night).

Still got questions? Visit http://www.apd.army.mil/pdffiles/r385_10.pdf and go to chapter 11. Got an additional duty safety officer or NCO? Pick their brains; they have a wealth of knowledge.

Remember, you're a Soldier from the moment you don your uniform for drill until you take it off at home after drill. Drive safely so you'll be around for next month's drill. ⏪

ARE WE THERE YET?



Be realistic about the distance you can cover in a day. Find out before hitting the road. Use the easy, online **TRiPS** tool today!

TRAVEL RISK
TRiPS
PLANNING SYSTEM

<https://safety.army.mil>

PAULA ALLMAN
Strategic Communication Directorate
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

Without accident investigations, many questions would go unanswered, prevention measures would not be developed and aircrews would be left to make the same mistakes that often took the lives of fellow aircrew members.

ACCIDENT INV

A Nec

Obviously, the most asked question following an accident is "what happened?" Was materiel failure a cause? Were environmental factors responsible? Or was human error to blame? We must also know why it happened. If a weakness in leadership, training, standards or support functions led to the tragedy, then we must find that weakness.

When an accident occurs, determining the circumstances surrounding the accident and finding answers to these questions becomes a driving force. Following an accident, the very reliability of the aircraft is sometimes questioned. If a mechanical malfunction caused the accident, the possibility exists

that the same malfunction could strike other aircraft. Although mechanical malfunctions do occur, the majority of accidents result from human error. We need to know why the errors occurred.

Before prevention measures can be developed, we must determine what happened, what caused it to happen and why specific errors occurred. If cause factors can be determined, then the question becomes "what can we do to prevent this kind of accident from happening again?"

Centralized Accident Investigation

These basic questions (what happened, why it happened and what can be done to prevent

this from happening again) are sometimes referred to as the "3-W" questions. They are not new ones, and they do not apply only to aviation accidents; they are relevant to all accidents. They are questions the U.S. Army Combat Readiness/Safety Center (USACR/Safety Center) has been attempting to answer since April 1978, when the Army began a trial period of centralized accident investigations (CAI).

These CAIs have proven so effective that they are still the process used today to answer the 3-W questions. Currently, the USACR/Safety Center investigates all Class A aviation accidents Armywide. The success of the program was such that on Oct. 1,

1982, the Army expanded these investigations to include selected Class A and B ground accidents.

The Quest for Answers

As this issue of Knowledge is being prepared, accident investigators are deployed and diligently searching for answers, trying to determine what happened and why. But it will be some time before those answers are known. Sometimes, despite all the

focus is then diverted to finding ways to enhance the safety of our aircrews. Sometimes the "fix" is at unit level, such as improving unit training or enforcing standards. Other times, the fix is at Army level, such as improving school training or changing equipment design or operating procedures.

Safety is about helping units conserve resources and maintaining readiness through

accident prevention. Accident investigation is a necessity in our safety program. With the information obtained from accident investigations, safety programs and prevention measures can be developed to protect our aviation resources in similar situations, bringing safety back as our first line of defense. ◀

INVESTIGATION — Necessity for Safety

enormous efforts of the CAI team and the specialists who are called in to assist with the analysis of the evidence available, definitive answers cannot be found. In a few cases, suspected scenarios are the only "answers" that can be determined. All accidents are tragic; however, these are especially so because unanswered questions limit our ability to develop prevention measures.

In most cases, the accident investigation process yields answers. Based upon those answers, the readiness shortcomings — whether they be individual, Leader, training, standards or support failures (often it is a combination of failures) — are identified. The





WATCH for the

NATIONAL SAFETY COUNCIL
www.nsc.org

Got kids in school? Did you know October 18-24 is National School Bus Safety Week? Here are some tips from the National Safety Council to help keep your children safe.

Getting on the School Bus

- When waiting for the bus, stay away from traffic and avoid roughhousing or other behavior that can lead to carelessness.
- Do not stray onto streets, alleys or private property.
- Line up away from the street or road as the school bus approaches.
- Wait until the bus has stopped and the door opens before stepping onto the roadway.
- Use the handrail when stepping onto the bus.

Behavior on the Bus

- When on the bus, find a seat and sit down. Loud talking is not allowed because noise can distract the bus driver.
- Never put your head, arms or hands out the window.
- Keep aisles clear. Books or bags are tripping hazards and can block the pathway in an emergency.
- Before you reach your stop, get ready to leave by getting your books and belongings together.
- At your stop, wait for the bus to stop completely before

getting up from your seat. Then, walk to the front door and exit, using the handrail.

Getting off the School Bus

- If you have to cross the street in front of the bus, walk at least 10 feet ahead of the bus along the side of the road until you can turn around and see the driver.
- Make sure the driver can see you.
- Wait for a signal from the driver before beginning to cross.
- When the driver signals, walk across the road, keeping

OUT Kids!



an eye out for sudden traffic changes.

- Do not cross the centerline of the road until the driver has signaled that it is safe for you to begin walking.
- Never cross the street behind the bus. Stay away from the rear wheels of the bus at all times.

Correct Way to Cross the Street

Children should always stop at the curb or the edge of the road and look left, then right and then left again before crossing. They should continue looking in this manner until they are safely across. If a child's vision is blocked by a parked car or other obstacle, he should move out to where drivers can see him and he can see other vehicles, then stop and look left-right-left again.◀



Family
engagement kit

<https://safety.army.mil>

Army Safe is Army Strong and that starts with a Soldier's Family. Have the information to help you and your Family stay SAFE.



Be prepared and get your own
Family Engagement Kit TODAY!

How Do I Get



We see exit signs inside buildings all the time, but many of us don't give them a second thought. If there was a fire or other emergency and you had to make a quick exit from a building, would you know where to go?

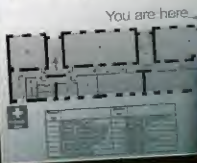
Creating an emergency exit strategy probably isn't at the top of your "to-do" list. Yet, every day, people lose their lives because they're unable to get out of a burning structure. As you look around your home or office, you might think that you wouldn't have any problem finding your way to safety. But what if your normal exit is blocked by flames? What happens if you become disoriented in the heavy smoke? Will you still be able to make it out of this situation alive?

Exiting a burning building can even challenge those who fight fires for a living. On the night of Dec. 3, 1999, in Worcester, Mass., two firefighters who responded to a warehouse fire became disoriented while searching the building for homeless people. Two additional teams of firefighters entered the building to conduct a search and rescue of the first team, but they, too, became lost inside the maze of doors, hallways and windowless rooms.

Get Out of Here?

Fire escape routes

You are here



VICKI ARNESON-BAKER
GS
U.S. Army Combat Readiness/Safety Center
Fort Rucker, Ala.

All six firefighters died in this fire. Think about that. Six highly trained, career firefighters who fully understood the nature of the situation were unable to exit a building they had entered just minutes earlier. If it happened to them, you better believe that it could happen to you.

Consider all the places you visit throughout the day — the office, supermarket, warehouse supercenters, hotels, restaurants and motorpools. Do you always know where to find the closest exit? Do you know of an alternate exit if your first choice is too crowded or blocked?

How long would it take you to find an emergency exit when you're in a state of panic

inside a room full of smoke and desperately gasping for air? Would it take 15 seconds? How about 30 seconds? Longer? Next time you're in one of these places, see if you can locate an exit sign. Remember, every second counts in an emergency and every hesitation reduces your chance of survival.

There are a variety of regulatory requirements for the design and construction of exit routes, doors, stairs and lighting and multiple actions we can all take to ensure the components of an exit route are maintained and operational, including:

Exit Routes

- Ensure exit routes are free and unobstructed by materials,

equipment, locked doors or dead-end corridors.

- Keep exit routes free of explosives or highly flammable furnishings and other decorations (i.e., don't store a flammable cabinet in an exit hallway or next to the door).
- Arrange exit routes so employees will not have to travel toward a high-hazard area unless the path of travel is effectively shielded from the high-hazard area.
- Maintain exit routes during construction, repairs or alterations.

Exit Doors

- Mark doors or passages along an exit access that could be

mistaken for an exit as "Not an Exit" or with a sign identifying its use, such as "Closet."

- Keep exit route doors free of decorations or signs that obscure their visibility.
- Ensure emergency exit doors are unlocked when the building is occupied and panic bars operate properly.

Exit Lighting and Signage

- Provide adequate lighting for exit routes.
- Post signs along the exit access indicating the direction of travel to the nearest exit, especially if that direction is not immediately apparent.

- Perform monthly and annual tests on emergency lights and exit signs.

When time is critical, you don't want to waste it searching for the nearest exit. Have a plan in place. When disaster strikes, don't get stuck yelling, "How do I get out of here?"



TESTING EMERGENCY LIGHTS AND EXIT SIGNS



Unfortunately, emergency lighting equipment is often installed and forgotten until a power failure. Testing of emergency lighting equipment is required by the National Fire Protection Association (NFPA)-101, Life Safety Code®, section 7.9.3, Periodic Testing of Emergency Lighting Equipment: "Functional testing shall be conducted monthly with a minimum of 3 weeks and a maximum of 5 weeks between

tests, for not less than 30 seconds. ... Functional testing shall be conducted annually for a minimum of 1½ hours if the emergency lighting system is battery powered. Written records of visual inspections and tests shall be kept by the owner for inspection by the authority having jurisdiction."*

Most emergency lights or exit signs have a small "push-to-test" button somewhere on the casing. To test your equipment, push and hold the button

for 30 seconds to test the bulbs and battery. The lights should come on and remain at the same brightness level for the full 30 seconds. It's important to test for the full 30 seconds to ensure the batteries have more than just a surface charge. Submit a work order if the light dims right away or if some of the bulbs don't work. Remember to record your inspection.

To conduct the 1½-hour annual tests, it may be easier to throw a circuit



FYI

Army Regulation 385-10, The Army Safety Program, chapter 18-15, Exit and Egress, states that "exits and egress will meet the requirements of 29 CFR 1910.33 through 29 CFR 1910.39, Subpart E; fire prevention plans; and The Life Safety Code (NFPA 101)." For more information on exits and emergency exit lighting, consult your local safety office and the following references:

- 29 CFR 1910 Subpart E – Means of Egress
- NFPA-101, Life Safety Code®, 2009.
- UFC 3-600-01, Fire Protection Engineering for Facilities, chapter 2-5, Means of Egress.

breaker and observe the lights for 90 minutes. You may want to ensure that you first saved any computer data if they are connected to the same circuit. In some larger buildings, such as a hospital, emergency power for emergency lighting and exit signs is provided by a generator that is tested on a monthly basis by a full-time building maintenance staff. For additional support, contact your local safety office or fire inspector.



** The test interval is permitted to extend beyond the 30-day interval with the approval of the authority having jurisdiction and with the completion of an evaluation of 21 additional criteria found within the Life Safety Code®.*



Accidents occurred between June 1-30, 2009

LOSS

AVIATION

AH-6M



CLASS C

■ The crew experienced a malfunction of the aircraft's M134 mini-gun during live-fire training. Shrapnel injured one crewmember and damaged the aircraft.

AH-64D



CLASS C

■ Preflight inspection revealed the camlock had separated from the L540 panel and punctured the stabilator during a previous flight.

CH-47D



CLASS C

■ Postflight inspection revealed damage to the forward rotor system blades. Damage to the blades was consistent with a tree strike. Recon of the flight route identified a tree with damage from a main rotor blade (MRB) strike.

CH-47F



CLASS A

■ The aircraft experienced an apparent droop-stop failure during aircraft shutdown and one aft rotor blade contacted the fuselage.

CLASS C

■ The crew noticed a No. 2 engine oil temp spike during departure from the traffic pattern. Inspection revealed oil in the reservoir was low and the return lines were loose.

MI-17



CLASS A

■ The aircraft was in a flight of three ground taxiing to parking when its main rotor system contacted a hangar on the airfield. All MRBs and the tail boom sustained damage.

ARMY >> AVIATION LOSSES

Fiscal 2009
as of Sept. 8, 2009



Class A/Fatalities

ATTACK	1/1
RECON	9/4
UTILITY	9/6
CARGO	1/0
TRAINING	2/0
FIXED-WING	0/0
UAS	4/0

TOTAL 26/11

ARMY >> GROUND LOSSES

Fiscal 2009
as of Sept. 8, 2009



Class A/Fatalities

AMV	17/16
ACV	15/4
PERSONNEL INJURY <small>includes weapons-handling accidents</small>	28/21
FIRE/EXPLOSIVE	6/1
PROPERTY DAMAGE	4/0

TOTAL 70/42

OH-58A



CLASS A

■ The aircraft descended into a river for unknown reasons. Potential water damage could result in uneconomical repair.

CLASS B

■ During autorotation with power recovery, the aircraft experienced a low rotor RPM. The aircraft yawed to the right and the MRBs made contact with the tail rotor driveshaft, severing it.

OH-58D(1)



CLASS A

■ The aircraft contacted the ground during a simulated engine failure at altitude. No crew injuries were reported.

CLASS C

■ The aircraft experienced an NG overspeed of 108 percent for one second during a simulated engine failure maneuver.

TH-67A



CLASS A

■ The crew was conducting simulated engine failure training when the aircraft crashed into an open field. The instructor pilot suffered fatal injuries.

UC-35A



CLASS C

■ The crew encountered instrument meteorological conditions with heavy precipitation during flight. Postflight inspection revealed hail damage to the nose cone, right-hand wing, deice boot and antennas.

UAS



MAV

CLASS B

■ The air vehicle operator experienced degraded input. While attempting to land, the engine failed and the unmanned aircraft (UA) impacted the ground. The UA was recovered but deemed a total loss.

RQ-7B



CLASS C

■ The UA experienced an engine failure during controlled flight. The recovery chute deployed and the UA was recovered upon ground contact.

GROUND

ACV



CLASS A

■ A Soldier serving as the gunner in a Mine Resistant Ambush Protected vehicle was killed when the vehicle went off the road and overturned. Personal protective equipment (PPE) use was not reported.

CLASS B

■ Two Soldiers were injured when a fire started in the cab of their M88A2 Hercules recovery vehicle.

AMV



CLASS A

■ A Soldier suffered fatal injuries when he was ejected from an M1151 HMMWV he was operating. The vehicle overturned as the Soldier maneuvered it off a trail near an observation post. Seat belt use was not reported.

■ A Soldier serving as the gunner on an M1151 HMMWV was killed when the vehicle was broadsided by a fuel tanker and overturned. At the time of the accident, the driver of the HMMWV was making a U-turn to respond to a stalled vehicle. The fatally injured Soldier was wearing a gunner restraint system. The drivers of the HMMWV and fuel tanker were not injured.

CLASS B

■ Three Soldiers in an M1151 HMMWV were injured when the driver fell asleep and the vehicle ran off the road, hit a small berm and overturned. The HMMWV's passenger-side front and rear doors were ripped off, and the tires on the left side of the vehicle were torn off. The Soldiers were wearing seat belts, helmets and other PPE.

Personnel Injury



CLASS A

■ A Soldier collapsed and later died after participating in organized flag football physical training.

CLASS B

■ A Soldier suffered a permanent partial disability injury to his hand when it was caught in the fan blades of a running generator. The injury resulted in the loss of the Soldier's thumb to the first joint and index and middle fingers to the second joint.

EXPLOSIVE/FIRE



CLASS A

■ A Soldier was injured and an M119 Howitzer was damaged when a 105 mm HE round detonated in the gun tube during live-fire iteration.



ALWAYS

DRIVING

POV



CLASS A

■ A Soldier on rest and recreation leave was driving his privately owned vehicle (POV) early in the morning when he struck a curb, overturned several times and then struck a metal pole. The Soldier was not wearing his seat belt and thrown from the vehicle. He later died at a local medical treatment facility. His passenger, who was wearing a seat belt, was treated and released.

■ A Soldier was speeding when his POV struck a dirt mound, vaulted into the air, struck a utility pole 15 feet above its base, overturned twice and ejected him before landing in a tree. The Soldier, who was not wearing a seat belt, was transported for medical treatment but later died.

■ A Soldier was speeding when he lost control of his POV, crossed three lanes of traffic, left the road, struck a tree and partially rolled over. The Soldier, who was

POV DRIVING LOSSES

Fiscal 2009

as of Sept. 6, 2009

Class A/Fatalities

CAR	34/34
SUV/JEEP	15/15
TRUCK	11/11
MOTORCYCLE	31/29
PEDESTRIAN	6/6
OTHER*	3/3

*Includes: vans and ATVs

98

TOTAL DEATHS

Fiscal 2008: 123 3 Year average: 114

BE PREPARED WHILE ON AN ATV

wearing his seat belt, died at the scene. His passenger suffered only minor injuries.

■ A Soldier was driving his pickup with two passengers when he lost control, left the roadway, rolled down an embankment and was ejected. The Soldier died at the scene.

■ A Soldier was speeding when he lost control of his POV and struck a tow truck and then a sedan and a tree, causing a multivehicle fire. The Soldier died at the scene.

■ A Soldier was killed when he crossed the centerline in his pickup and collided with a sport utility vehicle and a sedan. The Soldier, who was not wearing his seat belt, was transported to a hospital, where he later died.

■ A Soldier in absent-without-leave status was driving his POV when he lost control and overturned several times. He was not wearing his seat belt and suffered fatal injuries.

POM



CLASS A

■ A Soldier was riding his

motorcycle during emergency leave when he rear-ended a vehicle in his lane. The Soldier, who was not wearing his helmet or his other personal protective equipment, was transported to a hospital, where he later died.

CLASS B

■ A Soldier lost control while riding his motorcycle and was pinned beneath it while it slid down the road. The Soldier suffered severe injuries to his leg, resulting in it being amputated above the knee.

ATV



CLASS A

■ A Soldier crashed while riding his all-terrain vehicle (ATV) on an improved road. The Soldier, who was not wearing a helmet and had not attended an ATV rider safety course, was taken to a medical center, where he later died.

BEFORE RIDING, DO THIS:

- Get trained.
- Always wear a helmet, eye protection, gloves and over-the-ankle boots.
- Never allow children on adult ATVs.
- Don't ride tandem.
- Don't ride on pavement or asphalt.
- Never ride under the influence!

<https://safety.army.mil/povmotorcyclesafety>

Editor's note: Information published in the accident briefs section is based on preliminary loss reports submitted by units and is subject to change. For more information on selected accident briefs, e-mail safe.knowledge@conus.army.mil.



GET DIGITAL

GRAT

GROUND RISK ASSESSMENT TOOL

<https://safety.army.mil>

GRAT-S
<http://safetv.army.mil>

Now available on the
SIPRNET



Hand and Plick Assessment Tool

...the Communist Party Administration's Top

The 6-point Likert instrument (see Table 1) was developed by the U.S. Army Logistics Readiness Survey Center to supplement the Logistics Readiness questionnaire (LDRS) planning and execution survey process. It relates to the management, organization and number of logistics personnel with specific responsibilities in units.

[illegible]

significantly less in reduced costs after it is closed or transferred.

2000-2001

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Figure 2.3: Developing basic strokes

